

**COBB COUNTY WATER SYSTEM
APPLICATION FOR PREQUALIFICATION
FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION**

Instructions

A. General

Contractors who desire to be considered for inclusion on the Cobb County Water System (CCWS) List of Prequalified Contractors for Cured-in-Place Pipe (CIPP) Rehabilitation must complete and submit an Application for Prequalification. This application process must be followed even if the firm has been previously prequalified by the CCWS for a similar project.

All information submitted for the prequalification process shall become the property of the Cobb County Water System. To the extent allowed by law, financial information will be considered confidential by the Cobb County Water System. The CCWS reserves the right, but does not have the obligation, to request the submittal of additional information.

The Applicant is advised that applications are reviewed by the CCWS upon receipt; however, additions to the List of Prequalified Contractors are made by the Cobb County Board of Commissioners only on a quarterly basis. In addition, contractors must be prequalified before the first bid advertisement of a particular CIPP rehabilitation project to be eligible to submit a bid on that project.

The prequalification status of all contractors will be re-evaluated on a biennial basis. All contractors will be required to submit a new application at that time; however, prequalified firms must submit revised information to the CCWS at any time any of the following changes occur.

1. Acquisition of contractor or name change;
2. Change in financial status that could adversely affect the ability of the contractor to perform the work;
3. Changes that adversely affect the Contractor's ability to obtain Bonds and/or insurance required to perform work;
4. Material changes in staffing, experience, or equipment;
5. Any other changes that could alter the Contractor's prequalification standing with the CCWS.

B. Completeness

Prequalification Application packages which have not been completed properly or do not include the necessary attachments will be returned to the Applicant without a complete review. The enclosed Applicant's Checklist is intended to serve as a reminder of the required information to be included in the submittal. This checklist form must be included with the application.

The Prequalification Application packages must be organized in five sections, each section delimited by tabbed dividers. The information to be included in each section is identified in the Applicant's Checklist.

C. Forms

The information requested must be submitted on the forms provided within the attached Contractor's Qualification Statement and must be organized as indicated on the Applicant's Checklist. Any additional pages attached to the form must include the Applicant's name and cross references to item numbers on the application form. The submittal of Letters of Reference from owners and engineers regarding the Applicant's performance on previous projects is desired and encouraged; however, the project experience forms (Form for Similar Projects and References – CIPP Installation) must be completed and included with the application.

The Contractor's Qualification Statement shall be filled out in full by typing or legible hand lettering in ink. All pages may be copied as needed.

An original and one copy of the Prequalification Application package must be submitted to:

Mr. ~~Ü&öáÁ ä ä~~, P.E.
Engineering & Records Division
Cobb County Water System
Customer Services Building
660 South Cobb Drive
Marietta, GA 30060-3105

D. Criteria for Qualification

All contractors applying for prequalification must have experience installing the CIPP system described in the CCWS standard specification, Section 13341 – Sewer Rehabilitation by Cured-in-Place Pipe Method (see Attachment No. 2). The Applicant has the option to apply for qualification for either or both of the following categories of CIPP rehabilitation projects:

- Level A: 6-inch through 48-inch nominal pipe diameter
- Level B: 54-inch and larger nominal pipe diameter

Applicants are to indicate which level (Level A, Level B, or both) that they are intending to be evaluated for prequalification. If the CCWS adjudges the Applicant does not qualify for one of the categories applied for, the prequalification may be restricted to "Level A Only" or "Level B Only". Final determination of the Applicant's pre-qualification status lies solely with Cobb County.

In determining the Applicant's qualifications, the following factors will be considered: company experience, individual staff experience and qualifications, references on completed projects, financial stability (including bonding capacity and insurance coverage), and safety record. Contractors must be licensed as a *Utility Contractor* by the State of Georgia to perform work for the Cobb County Water System.

Company Experience - Level A

The following minimum criteria are expected to be met by an applicant for Level A prequalification:

1. Three years experience;
2. Installation of 300,000 linear feet (LF) of the specified CIPP system for clients located in the United States;
3. Five completed CIPP projects, including three projects within the past five years;
4. Completed projects in pipe diameters 6-inch through 48-inch, including those comprised of at least:
 - a. 15,000 LF of pipe diameters 8-inch and larger;
 - b. 10,000 LF of pipe diameters 10-inch and larger;
 - c. 5,000 LF of pipe diameters 12-inch and larger;
 - d. 10,000 LF of pipe diameters 42-inch to 48-inch.
5. CIPP system manufacturer's approval to install their product, confirmed by certification or licensure.
6. Three years operation of company-owned in-house resin impregnation (wet-out) facilities staffed with the firm's own full-time, properly trained personnel.
7. Operation under third-party certified quality management system to ISO 9001 or equivalent standards.

Company Experience - Level B

The following minimum criteria are expected to be met by an applicant for Level B prequalification:

1. All Level A criteria, plus;
2. Five completed CIPP projects within the past five years utilizing "Over the Hole" (OTH) techniques and on-site wet-out procedures in pipe diameters 54-inches or larger.

Staff Experience

1. On-Site Superintendent shall have a minimum of five years experience with the installation of cured-in-place pipe, including the supervision of at least three successfully completed projects, each totaling a minimum of 10,000 linear feet of CIPP installation in pipe sizes from 6-inches to 48-inches in diameter. Experience must include a minimum of 5 years of supervising flow diversion operations with bypass pumping and/or other methods. The Superintendent of a Level B Applicant shall have supervised at least two successful large diameter "Over the Hole" (OTH) installations.
2. Installation Crew shall have a minimum of two members with three years CIPP installation experience. Installers shall have 100,000 linear feet and/or 300 line sections of successful CIPP installation experience.
3. Curing Technician shall be certified and approved as an operator by the CIPP system manufacturer or an independent testing agency for the specified CIPP technology.
4. Lateral Reinstatement Technician shall have a minimum of one year of experience operating the remote cutting equipment used during reinstatement of laterals after CIPP installation.

E. Financial Information

Applicants are required to submit financial information to enable the CCWS to adjudge the firm's financial stability. The financial information required for the prequalification review process may be submitted in one of the following two formats:

1. Copies of financial statements included as an attachment to the Application for Prequalification; or
2. Submittal of the attached Financial Information Form, completed by an independent certified public accountant, using data extracted from the Applicant's financial statements.

All financial statements will be returned to the Applicant or will be destroyed upon completion of the review of the submitted information. If the Applicant desires for the statements to be returned, a self-addressed, stamped envelope or a delivery service account number for return shipment must be included with the application.

Note that whether submitting copies of financial statements or information extracted from these statements, the statements must be audited or reviewed. Compiled or self-prepared financial statements are not acceptable for the CCWS prequalification review process.

F. Bonds and Insurance

The CCWS requires performance and payment bonds in the full amount of the bid on each project, in addition to appropriate insurance coverage for the Contractor. A copy of the "Insurance Requirements for Contractors" for Cobb County is attached. The CCWS will require current certificates of insurance indicating full coverage prior to executing contracts.

G. Policy

A copy of the Cobb County's Policy on Pre-Qualification of Contractors is attached. Additional information regarding the prequalification process is contained therein.

H. Georgia Security & Immigration Compliance Act

Applicants are advised that all Contractors performing work for Cobb County must comply with the requirements of O.C.G.A. Sec. 13-10-91 (the "Georgia Security & Immigration Compliance Act") and Rule 300-10-1-.02 of the Rules of the Georgia Department of Labor. The procedures and requirements of the Cobb County Government related to the Georgia Security & Immigration Compliance Act, along with the affidavits and a compliance certification form are included in the bid documents of all Cobb County Water System projects. Completed affidavits and forms are to be submitted with the bid on a project or at the time of contract execution for an awarded project, as indicated in the specific bid documents. Bids submitted without the required affidavits will be considered non-responsive and will be disqualified from further consideration.

I. Disadvantaged Business Enterprises (DBE) Participation

Cobb County Government encourages the participation of all businesses in offering their services and/or products. The Cobb County Government has the goal to fairly and competitively procure the best product at the most reasonable cost.

While the Cobb County Government does not administer a Disadvantaged Business Enterprise (DBE) certification program, the County does desire to identify DBE participation in our contracts and to quantify that participation. The Contract Documents of Cobb County Water System projects will include information regarding the identification of the DBE status of contractors and/or subcontractors, along with forms to be used for periodic reporting of the level of participation during construction of the project.

J. Other

The prequalification of a Contractor will not deprive the Cobb County Water System of the right to reject any bid, where other circumstances and developments have, in the opinion of the County, changed the qualification or responsibility of the Contractor.

The prequalification of a Contractor through this process shall not be construed as approval for that Contractor to bid on any Cobb County Water System project; rather, only on those projects so indicated in the project's Advertisement for Bids. Depending on the nature and/or complexity of a particular project, a separate prequalification process may be necessary.

This form, its completion by the Applicant, and its use by the CCWS, shall not give rise to any liability on the part of Cobb County to the Applicant or any third party or person. This is not a solicitation for bid. No guarantees are made or implied that a project will be constructed, either in part or whole. The Applicant accepts all risks and cost associated with the completion of the prequalification package without financial guarantee.

K. Attachments

1. Contractor's Qualification Statement Forms.
2. Sample Section 13341, Sewer Rehabilitation by Cure-In-Place Pipe Method.
3. Insurance Requirements for Contractors.
4. Cobb County Policy on the Pre-Qualification of Contractors.

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ATTACHMENT NO. 1

**COBB COUNTY WATER SYSTEM
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Contractor's Qualification Statement

1. Name of Contractor: _____
(AS REGISTERED WITH THE SECRETARY OF STATE)
2. Contact Information:
 - a. Mailing Address: _____

 - b. Business Address: _____

 - c. Telephone number: (____) _____
 - d. Fax number: (____) _____
 - e. Primary Contact Person:
Name: _____
Email Address: _____
3. Licensing Information:
 - a. State of Georgia Utility Contractor License Number: _____
 - b. Business License Number: _____ County of Issue: _____
4. Type of Organization (check appropriate block):
 Corporation Partnership Sole Proprietorship
 - a. If corporation, indicate:
State of incorporation: _____ Date: _____
 - b. If partnership, indicate date of organization: _____
 - c. If sole proprietorship, indicate number of years in continuous business: _____
 - d. List names of officers or partners and their length of time with the firm.

_____ years

_____ years

_____ years

5. How many persons does your company permanently employ? _____
6. How many years of experience in the proposed type and size of construction work has your organization had as a general contractor? _____
7. List all names previously used by your firm:

8. List all companies, firms, or organizations that own any part of your organization:

9. Is your firm currently prequalified for similar work with other municipalities or public utilities?
Yes: _____ No: _____
If yes, list names of municipalities or public utilities:

10. Provide a summary of the background and experience of the members of your organization who perform key functions on CIPP rehabilitation projects. The summary must include the individual's name, position and number of years with the firm, details regarding work experience with project names and dates, information about education, specialized training and/or certifications, and other pertinent information. At a minimum, the following positions on your project team shall be identified in this submittal.

Office Management
Project Manager
Safety Manager
Certified Utility Manager

Jobsite Management
On-Site Field Superintendent
Installation Crew Members
Curing Technician
Lateral Reinstatement Technician
Safety Representative

➔ *Attach personnel summaries to demonstrate that personnel have the minimum experience and expertise described in the Instructions section of this application package.*

11. Submit an audited or reviewed financial statement for each of the past three years, including the most recent fiscal year activity. The statements must be prepared by an independent, licensed certified public accountant. Financial statements must include balance sheets, income statements, and a statement of retained earnings, supporting schedules, and notes. All copies of financial statements will be returned to the Applicant following completion of the prequalification review process or will be destroyed as indicated below.

Indicate desired disposition of copies of financial statements:

Return to Applicant Destroy

As an alternate to the submittal of Financial Statements, submit a completed Financial Information Form prepared by an independent, licensed certified public accountant. The Form

must include information for each of the past three years, including the most recent fiscal year activity.

- ➔ *Submit Financial Statements for the last three years, including the most recent fiscal year.*
- ➔ *As an alternate, submit a completed and certified Financial Information Form.*
- ➔ *Include SASE or delivery service account number for return shipment of financial statements, if return is desired.*

12. What is your approximate bonding capacity?

- a. Single Project Capacity: \$ _____
- b. Total Aggregate Capacity: \$ _____
- c. Remaining Capacity: \$ _____

➔ *Provide a dated letter from your surety company agent that certifies the current bonding limits stated above.*

13. What is the name and AM Best rating of your bonding company? List the name and telephone number of your bonding company agent.

Bonding Company: _____ AM Best Rating: _____

Agent Name: _____ Telephone No.: _____

14. Liability Insurance: Provide the following information regarding your insurance coverage.

- a. Name of Primary Agent or Broker: _____
- b. Telephone No.: _____ Fax No.: _____

➔ *Provide a copy of a current Certificate of Liability Insurance. Note that insurance certificates confirming that your firm carries the minimum coverage outlined in "Section 00750 – Insurance Requirements for Contractors" (Attachment No. 3) must be provided when a contract is executed for a particular project.*

15. Have you ever been refused surety, bond, or liability insurance?

Yes: _____ No: _____

➔ *If yes, attach an explanation.*

16. Safety Information:

a. Does your firm have a written Safety, Health, and Environmental Program?

Yes: _____ No: _____

b. Obtain from your insurance agent/broker/carrier your Experience Modification Rate (EMR) for the past three years and list these Rates in the spaces provided below.

Year	Experience Modification Rate
20__	
20__	
20__	

→ Provide a copy of your workers compensation insurance carrier's documentation (e.g., NCCI Workers Compensation Experience Rating form) showing calculation of your EMR for the most current year.

c. Has your firm received any OSHA violations (citations) in the past three years?

Yes: _____ No: _____

→ If yes, attach a separate page describing the citations, including information about the dates of the citations, the nature of the violation, the project on which the citation was issued, the amount of penalty paid, if any. This question must be answered "Yes" and information provided if citations have been appealed or contested, but have not yet been resolved. If the citation was appealed and a decision has been issued, state the case number and the date of the decision.

17. Do Applicant's business policies conform with government regulations regarding nondiscrimination of employment and employment practices on the basis of sex, race, color, national origin, ancestry, age, religious conviction, veteran status, handicap status, political beliefs or non-job related criteria?

Yes: _____ No: _____

18. Is your firm classified as a Disadvantaged Business Enterprise (DBE)?

Yes: _____ No: _____

If yes, indicate:

DBE Certification Number: _____

Name of Certifying Organization: _____

19. Has your firm ever failed to complete any work awarded to you?

Yes: _____ No: _____

→ If yes, attach a detailed explanation.

20. Has your firm been assessed liquidated damages on any project in the past five years?

Yes: _____ No: _____

→ If yes, attach a detailed explanation.

21. Has your firm been involved in claims, arbitration, mediation, and lawsuits on public works projects, either a plaintiff or defendant, in the last five years?

Yes: _____ No: _____

→ If yes, attach a separate sheet listing: the style of the case, when filed, name of the claim, the nature of the claim, parties to the litigation, court in which litigation was filed and civil action number, whether the case is pending or resolved, and, if resolved, the date of and manner in which it was resolved (e.g., relief granted by court, settlement by or among parties, dispositive motion, trial verdict) and the name and location of the project involved.

22. Does your firm (including any member, officer, partner, subsidiary or affiliate thereof) have a pending citation for violating any provision of The Official Code of Cobb County, Georgia at the current time?

Yes: _____ No: _____

➔ *If yes, attach a separate sheet with a detailed explanation of the Code violation and the status of the resolution of the citation.*

23. Provide a list of the major items of equipment that are available for cured-in-place pipe rehabilitation construction. Indicate any equipment items that are leased.

➔ *Attach a detailed equipment list with specific notation whether items are owned or leased.*

24. The Applicant must indicate below the “Company Experience Level” of rehabilitation and products for which it is requesting prequalification. Provide product and manufacturer information with the Application for named liner and resin materials. The Applicant may apply for either or both categories, as stated in the Instructions section.

Level A CIPP

Level B CIPP

Products:

Products:

25. Submit information regarding your “Company Experience” on the attached Form for Similar Projects and References to demonstrate that your firm meets the criteria described in the Instructions section. Include detailed information on a minimum of three cured-in-place pipe rehabilitation construction projects completed by your firm over the past five years. The names, addresses, location of the jobs performed, contract amounts, dates, and reference contact names with telephone numbers must be indicated on the form. Please be complete and ensure that all reference contact information is accurate and current. The submittal of Letters of Reference is desired and encouraged; but only in addition to the current reference contact information.

Submit one Form for Similar Projects and References for each project, using the blank form attached. Supplemental information in other formats may also be attached to the Form if desired; however, a completed Form must be submitted for each project.

➔ *Provide a Form for Similar Projects and References for at least three cured-in-place pipe rehabilitation construction projects completed within the past five years.*

➔ *Provide Letters of Reference or additional project data to supplement information presented on Form.*

26. Forms: The forms to be completed and submitted with the Application follow this page.

➔ Affidavit for Contractor – Certification of Prequalification Application Content

➔ Financial Statements or Financial Information Form (alternate to submittal of financial statements)

➔ Form for Similar Projects and References – Cured-in-Place Pipe Rehabilitation (copy as needed)

➔ Applicant’s Checklist

Note: This symbol (➔) indicates required attachments.

**COBB COUNTY WATER SYSTEM
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**Affidavit for Contractor
Certification of Prequalification Application Content**

I, the undersigned, _____ (typed name) as the authorized representative for _____ (typed company name), a contractor interested in becoming prequalified for bidding on Cobb County Water System projects, do hereby attest that all statements and representations made herein are true and correct to the best of my knowledge. These statements are made openly and freely without intent to influence or embellish actual conditions or circumstances that occurred.

I understand that the Cobb County Water System will investigate any and all statements and representations in this application made by my firm and me and we freely give our permission for them to do so. Should releases be required by any of our professional, financial, or bonding institutions to release verification of the enclosed data, I have provided them in the application package. I agree to waive any claims against the Cobb County Water System for the release of the information necessary to evaluate this application.

I am hereto sworn _____ (signature)

_____ (title)

_____ (firm name)

This date _____, _____

County of _____ State of _____

The foregoing instrument was acknowledged before me this _____ day of _____

_____ (Notary signature)

_____ (typed Notary name)

My commission expires _____

(Notary Seal)

**COBB COUNTY WATER SYSTEM
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Financial Information Form

All Applicants must provide an audited or reviewed Financial Statement or must submit this *Financial Information Form*, completed by an independent certified public accountant. The ratios and other information listed hereon must be calculated from data included in audited or reviewed Financial Statements prepared for the Applicant by an independent certified public accountant. The use of compiled or self-prepared financial statements in the completion of this *Form* is not acceptable.

Name of Applicant _____

Item	Value by Year		
	20__	20__	20__
Current Ratio ¹			
Quick Ratio ²			
Solvency Ratio ³			
Total Debt Ratio ⁴			
Debt to Equity Ratio ⁵			
Profitability ⁶			
Stockholder's Equity ⁷			

¹Current Ratio = Current Assets / Current Liabilities

²Quick Ratio = Cash + Cash Equivalents + Accounts Receivable / Current Liabilities

³Solvency Ratio = Shareholder's Equity / Total Assets

⁴Total Debt Ratio = Current Liabilities + Long-term Liabilities / Total Assets

⁵Debt to Equity Ratio = Current Liabilities + Long-term Liabilities / Shareholder's Equity

⁶Profitability = Profit before Taxes x 100 / Total Assets

⁷Stockholder's Equity – indicate range of value based on the following categories:

Less than \$500K = 1; \$500K to \$1M = 2; \$1M to \$2M = 3; \$2M to \$4M = 4; Greater than \$4M = 5

Accountant's Certification

I (we) have examined *this Financial Information Form* and the Applicant's original audited or reviewed financial statements, and find that the all information presented hereon is based on data extracted from those financial statements. I understand that this form is intended solely for use by the Cobb County Water System during review of the Application for Prequalification submitted by the Contractor. In addition, I have no personal financial interest or affiliation with this organization or individual.

Firm Signature: _____ Date: _____

Independent Certified Public Accountant:

Firm Name: _____

Address: _____

Telephone Number: _____

Email Address: _____

FORM FOR SIMILAR PROJECTS AND REFERENCES – CIPP INSTALLATION

Name of Contractor: _____		
Project Name: _____		
Location: _____		
Project Owner: _____		
Contact Person: _____		
Telephone Number: _____		
Email Address: _____		
Project Engineer: _____		
Contact Person: _____		
Telephone Number: _____		
Email Address: _____		
Contract Dates:	Date of Notice to Proceed:	Date of Final Completion:
Contract Amount:	Original: \$	Final: \$
Brief Description of Project (include CIPP product information, curing method, pipe sizes and lengths, name of On-Site Superintendent, and other pertinent information): 		
Type of Project (check appropriate box): <input type="checkbox"/> Public Works <input type="checkbox"/> Private Owner		
Contractual Status on Project (check appropriate box): <input type="checkbox"/> Prime Contractor <input type="checkbox"/> Subcontractor		
If subcontractor, provide name of Prime Contractor: _____		
Did you provide performance and/or payment bonds on this project? Yes ____ No ____		
Was this project completed within the original contract period? Yes ____ No ____		
Was the CIPP installed within the right-of-way of an active public roadway? Yes ____ No ____		
Did this project require traffic control and/or traffic diversion? Yes ____ No ____		
Was this project located in an established neighborhood? Yes ____ No ____		
Did this project include the restoration of landscaped yards? Yes ____ No ____		
Did this project include sewage bypassing or other flow diversion? Yes ____ No ____		
Did this project include heavy cleaning of the host pipe? Yes ____ No ____		
Did this project include service lateral reinstatement from the interior of the pipe? Yes ____ No ____		
Is a letter of reference from the project owner included with this application? Yes ____ No ____		

Copy this form for additional Similar Projects – CIPP Installation

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Applicant's Checklist

Applicant Name: _____ Date Submitted: _____

Instructions: Organize application package as outlined on this form with each section separated under a numbered tab. Submit this form with your application package. Note that incomplete submittals will be returned to the Applicant without review

GENERAL

An original and one copy of forms and attachments submitted?

SECTION 1

Contractor's Qualification Statement form filled out in its entirety?

Signed and notarized Affidavit for Contractor attached?

Applicant's Checklist included with submittal?

SECTION 2

Background and experience summaries for key personnel attached?

Equipment list attached?

SECTION 3

Form for Similar Projects and References completed in entirety and attached?

Letters of Reference attached?

SECTION 4

Financial statements or Financial Information Form attached?

SASE or delivery service account number included for return shipment of financial statements, if return option is selected?

Letter from bonding company agent attached?

Certificate of Liability Insurance form attached?

Information regarding inability to obtain surety, bond, or liability insurance attached (if applicable)?

Workers Compensation Experience Modification Rate form for most current year attached?

SECTION 5

OSHA citation information attached (if applicable)?

Information regarding failure to complete work attached (if applicable)?

Liquidated damages assessment information attached (if applicable)?

Information regarding claims, arbitration, mediation, and lawsuits attached (if applicable)?

Information regarding pending County Code violation citations attached (if applicable)?

ATTACHMENT NO. 2

COBB COUNTY WATER SYSTEM APPLICATION FOR PREQUALIFICATION FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION

SAMPLE SECTION 13341 - SEWER REHABILITATION BY CURED-IN-PLACE PIPE METHOD

PART 1 - GENERAL

1.01 SCOPE

- A. Furnish all labor, material and equipment to provide for the reconstruction of existing sewer pipes using an approved Cured-In-Place Pipe (CIPP) method by forming a new pipe within an existing pipe.
- B. The sewer reconstruction shall be accomplished by the installation of a thermosetting resin-impregnated flexible felt-fiber tube coated on one side with an impermeable plastic which is installed into the existing sewer utilizing a hydrostatic head or air pressure. Curing is accomplished by circulating hot water or the introduction of controlled steam throughout the length of the inverted tube to cure the resin into a hard, impermeable pipe with the plastic coating on the interior surface of the newly formed pipe. The CIPP shall extend the full length of the original pipe segment and shall provide a structurally sound, joint-less, close fitting and corrosion resistant cured-in-place pipe.
- C. It is the intent of this Specification to provide for the reconstruction of existing sewers by the CIPP method in pipes which have generally maintained their original shape. The CIPP shall provide flow capacity not less than 100% of the original pipe's flow capacity when new.
- D. The deterioration of sewers is an on-going process. In the event pre-construction inspections reveal the sewers to be in substantially different conditions than those in the design requirements specified herein, the Contractor shall submit a changed site condition notice and request such changes in liner thickness, supporting such requests with the appropriate design data satisfactory to the Owner.
- E. The Contractor shall include with its bid sufficient evidence to demonstrate that the Contractor meets the experience requirements listed in Article 1.03 of this Section and has successfully performed this type of work. (Reference Part 4 of Section 00300 of these Specifications for submission requirements.)

1.02 REFERENCE STANDARDS

Supply all products and perform all work in accordance with applicable American Society for Testing and Material (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI), or other recognized standards. The latest revisions of all standards in effect on date of advertisement are applicable. Where discrepancies exist

between this Specification and referenced product/process standards, this Specification shall govern.

1.03 QUALITY ASSURANCE

- A. In order to establish minimum product quality and Contractor capability, the following minimum requirements shall be met.
- B. CIPP System Manufacturer: The cured-in-place (CIPP) system must have a minimum proven performance record of 500,000 linear feet installed of the exact name-brand product bid in the United States, with a minimum of 40,000 linear feet in diameters 24-inch or larger. In addition, a minimum of 10,000 linear feet of 36-inch diameter or larger, of the exact name brand product must have been installed in the United States.
- C. Contractor
 - 1. The Contractor for the cured-in-place reconstruction of sewers must have a minimum of three years experience using the exact named product proposed and, have installed at least 300,000 linear feet of the exact named proposed product including at least 20,000 feet of 24-inch diameter (or larger) cured-in-place product. In addition, a minimum of 10,000 linear feet of 36-inch diameter or larger of the exact name brand product must have been installed in the United States.
 - 2. The Contractor must operate and have maintained his own resin impregnation (Wet-Out) facility, staffed with his own employees for a minimum of three years prior to the Bid date of this Contract. No out-sourcing of the wet-out phase of CIPP installed under this Contract will be allowed. The use of contract employees for the purposes of resin wet-out or installation of CIPP shall not be acceptable under this Contract.
- D. On-Site Field Superintendent: The Field Superintendent must have a minimum of 10 years experience with cured-in-place pipe products. In addition, the Superintendent must have supervised jobs in which at least 50,000 feet of pipe has been reconstructed using the exact named product proposed including a minimum of 10,000 feet of 24-inch diameter (or larger) CIPP product. The Field Superintendent for this contract shall be on-site during all phases of the work, including the subsurface manhole rehabilitation. All work shall cease whenever the Field Superintendent is not on-site.
- E. Resin Class
 - 1. The Contractor shall designate a wet-out facility and shall provide wet-out liner tubes from this designated facility only. Multiple facilities to supply wet-out liner tubes for the duration of this Contract may not be used without prior approval of the Owner.
 - 2. The Contractor shall place a sampling valve in-line at a point in the resin/catalyst mixing stage so that a sample of non-catalyzed resin may be

taken. A second sampling valve shall be placed in-line at a point after the resin/catalyst mixing stage, but prior to catalyzed resin injection into the liner so that a resin sample may be taken. Both sampling valves shall be left in place for the duration of the Contract.

3. The Owner shall have the right to inspect the designated wet-out facility and draw samples from one or both sampling valves without prior notice to the Contractor for the duration of the Contract.
4. Infrared Analysis
 - a. The Owner reserves the right to subject resin samples to an infrared analysis (IR Scan). This standard analytical test involves shining a beam of light in the infrared frequency region through a thin sample of subject resin. The frequency of light is then varied across the infrared spectrum. Chemical functional groups present in the resin being analyzed will absorb infrared light at specific frequencies and with characteristic absorption intensities.
 - b. A spectrum created from the measurement of light transmitted through the sample across the range of infrared frequencies shall be used to determine the resin's chemical fingerprint. For Standard Polyester resin, an overlaid IR spectrum of Reichhold PolyLite® 33420 shall be used as a baseline comparison for the purpose of a test under this Contract. For Enhanced Polyester resin, an overlaid IR spectrum of Reichhold PolyLite® 33420_E shall be used as a baseline comparison for the purpose of a test under this Contract.
 - c. The Owner may perform random Infrared Scans (IR Scans) and/or composite burn-offs to insure resin quality and consistency throughout the duration of the Contract and shall be responsible for the cost of IR testing.

1.04 SUBMITTALS

- A. Submit shop drawings in accordance with the requirements of Section 01300 of these Specifications. Specific submittal information shall include the following:
 1. The Contractor shall furnish data establishing the structural capabilities, chemical composition, thickness, and other mechanical properties of the liner system proposed.
 2. The Contractor shall furnish the proposed liner thickness for each pipe size and depth category, along with a certification signed and sealed by a professional engineer registered in the State of Georgia, to the effect that the proposed liner thicknesses were calculated based on the parameters specified in Article 2.04 of this Section of the Specifications and the site specific external loads. In no case will the proposed liner thicknesses be less than those specified in Article 2.04 of this Section of the Specifications.

3. The Contractor shall furnish three (3) copies of the manufacturer's brochures giving a complete description of the product proposed, its physical and chemical composition, the same for the thermosetting resin or epoxy hardener.
 4. Pre- and post-installation videos and logs per Articles 3.04 and 3.12 shall be submitted during the course of work.
 5. Catalyst system and resin/catalyst ratio.
 6. The proposed curing schedules/process shall be approved by the resin manufacturer in writing. Cure schedules shall include specific information on "step curing" procedures, "cooking times", duration and "cool down" procedures – all to be approved by the resin manufacturer in writing.
 7. The Contractor shall submit a Certificate of Authenticity from the resin manufacturer for each shipment to the wet-out facility to include the date of manufacture and Heat Distortion Temperature. This information shall be submitted before the manufacture or installation of any CIPP.
- B. The CIPP manufacturer shall submit written certification that the lining system proposed complies with all applicable requirements of these Specifications.
- C. The Contractor shall submit its proposed plan for ensuring that the finished and installed CIPP meets the minimum thickness requirements. The plan shall include detailed inversion procedures to reduce stretching and resin loss and to minimize shrinkage.

1.05 WARRANTY

The Contractor shall warrant all work and materials, excluding surface restoration, installed under this Section of the Specifications for five (5) years from the date of final acceptance. The date of final acceptance shall be the date final payment is made to the Contractor.

PART 2 - PRODUCTS

2.01 RESINS

- A. The resin class for CIPP installed under this Contract shall be a Standard Polyester or Enhanced Polyester unless otherwise directed by the Owner due to site-specific field conditions and/or design requirements. In the event that a vinyl ester resin is required, the Owner reserves the right to negotiate any difference in price over that of a standard or enhanced polyester resin with the Contractor.
- B. Polyester Resins
1. The Standard Polyester resin used shall be a high-grade corrosion resistant isophthalic polyester and be specifically designed for the CIPP being installed. Only premium, virgin, non-recycled resin shall be used. PET resins or those containing enhancement additives and/or fillers will not be

accepted. The acceptable resin, (Reichhold PolyLite® 33420 or approved equal) shall have been tested according to ASTM D2990, D5813, and F1216 by accredited, third-party testing facilities. Results of these tests shall be made available to the Owner upon request.

2. The Enhanced Polyester resin used shall be a high-grade corrosion resistant enhanced thixotropic medium reactivity, high viscosity, and rigid, chemical resistant isophthalic resin. The resin shall contain a mineral filler to enhance mechanical properties and be specifically formulated for use in the CIPP industry. The acceptable resin, (Reichhold PolyLite® 33420-E or approved equal) shall have been tested according to ASTM D2990, D5813, and F1216 by accredited, third-party testing facilities. Results of these tests shall be made available to the Owner upon request.
3. The resin must be manufactured under ISO 9002 certified procedures. The resin vendor must be able to reference the corrosion scale with the resin itself having a heat deflection temperature greater than 212 degrees Fahrenheit for the standard polyester resin or greater than 224 Fahrenheit for the enhanced polyester resin. Only premium, non-recycled resins will be accepted.

C. Urethane-modified Vinyl Ester Resins (If Applicable)

1. The resin used shall be a high-grade, premium vinyl ester combining outstanding corrosion resistance and high-temperature performance with excellent laminating characteristics. The resin must be manufactured under ISO 9002 certified procedures. (Proper certification shall be required).
2. The resin vendor must be able to reference the heat corrosion scale with the resin itself having a heat deflection temperature greater than 244 degrees Fahrenheit. Only premium, non-recycled resins will be accepted. PET resins or those containing enhancement additives and/or fillers will not be accepted.

D. The resin shall be shipped directly from the resin manufacturer's facility to the CIPP wet-out facility. The resin shall not be sent to any intermediate mixing facility. Copies of the shipping documents from the resin manufacturer shall be submitted to Owner indicating dates of shipment, originating and receiving locations.

2.02 CATALYST SYSTEMS

- A. The catalyst system shall be made up of a primary catalyst and a secondary catalyst. The primary catalyst shall be Akzo Perkadox 16 or approved equal and shall be added at a maximum of 1% of the resin volume by weight unless otherwise approved by the Owner. The secondary catalyst shall be Akzo Trigonox or approved equal and shall be added at a maximum of 0.05% of the resin volume by weight unless otherwise approved by the Owner.
- B. "Quick-Cure" or accelerated resin systems including those formulated by substantially increasing the amount of catalysts from that specified above will not be

allowed. Resins, catalysts and resin/catalyst mix ratios shall not be changed or altered during this Contract unless specifically approved by the Owner in writing.

2.03 LINER TUBE

- A. The tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216. In the event of a discrepancy between the referenced ASTM requirement and this Specification, this Specification will govern.
- B. The acceptable liner tube shall be constructed under ISO 9002 certified procedures. Proper certification shall be provided prior to the manufacture or installation of any CIPP.
- C. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular shaped pipe sections.
- D. The wet-out tube shall have a uniform thickness that when compressed at installation pressures shall meet or exceed design “finished and installed” thickness.
- E. The tube shall be manufactured to a size that when installed shall tightly fit the internal circumference and length of the original pipe. In the event that under-sized pipe is present, liner tube shall be manufactured so that overlap folds or wrinkles do not occur. Allowances shall be made for circumferential stretching during inversion.
- F. The outside layer of the tube, before installation, shall have an impermeable polyurethane or polyethylene plastic coating. This coating shall be an impermeable, flexible membrane that shall contain the resin and facilitate monitoring of resin saturation during resin impregnation. This coating shall form the inner layer of the finished pipe and is required for enhancement of corrosion resistance, flow and abrasion properties.
- G. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated layers. No material may be included in the tube that may cause de-lamination in the cured liner, and no dry or unsaturated areas or layer shall be evident.
- H. The wall color of the interior liner surface after installation shall be a light-reflective color so that a clear, detailed inspection with closed-circuit television equipment may be conducted.
- I. The outside of the tube shall be marked for distance at regular intervals not to exceed 10 feet. Such markings shall include the manufacturers name or identifying symbol.
- J. The minimum length shall be that deemed necessary by the Contractor to effectively span the distance between manhole sections of the segment to be lined unless otherwise specified. The line lengths shall be verified in the field before impregnation of the tube with resin.

2.04 CIPP DESIGN

A. Liner Thickness

1. The Contractor shall submit liner thickness calculations to the Owner for review. The CIPP shall be designed in accordance with the applicable provisions of F1216 and D2412 for “fully deteriorated gravity pipe conditions” and shall meet the following design conditions:
 - a. AASHTO H-20 Live Load whether under a road or not.
 - b. A dead load based on the depth of the pipe shown on the drawings and a soil modulus of elasticity of 1,000 psi, soil weight of 120 pounds per cubic foot and a coefficient of friction of $Ku'=0.130r$.
 - c. Short-term flexural modulus and long-term modulus when tested in accordance with ASTM D790.
 - i. Standard Polyester: 250,000 psi and 125,000 psi, respectively
 - ii. Enhanced Polyester: 300,000 psi and 150,000 psi, respectively
 - d. Minimum flexural strength of 4,500 psi when tested in accordance with ASTM D790.
 - e. Safety factor of 2.0 shall be used.
 - f. Groundwater elevation at the ground surface.
 - g. Maximum pipe ovality: 5%
 - h. Poisson ratio of 0.3.
 - i. Enhancement factor (K) of 7.
 - j. Service temperature range shall be 40 to 140 degrees
 - k. Maximum long-term deflection shall be 5%
 - l. Any and all other site specific external loads. The Contractor shall be responsible for identifying and determining specific external loads.
2. The liner thickness shall be reviewed by the Owner prior to tube manufacture. The liner shall not be less than the minimum acceptable thickness listed in the following table:

Pipe Diameter (Inches)	Minimum Thickness (Finished & Installed)
6	4.5 mm
8	6.0 mm
10	6.0 mm
12	9.0 mm
15	10.5 mm
18	12.0 mm
21	15.0 mm
24	18.0 mm
30	22.5 mm
36	27.0 mm

- B. The finished CIPP will provide a uniform smooth, interior wall surface with a Manning “n” coefficient of 0.011.

PART 3 - EXECUTION

3.01 GENERAL

- A. All reconstruction of existing gravity sewer mains using an approved CIPP Product and Contractor shall be performed in strict accordance with this Specification and the latest revision of ASTM F1216.
- B. Pull-In and Inflate methods of CIPP installations, (reference ASTM F1743), shall not in any case be acceptable.
- C. The Contractor shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention is drawn to those safety requirements involving work on an elevated platform, entry into a confined space, and the operation of high temperature equipment.
- D. The tube shall be fabricated to a size that, when installed, will neatly fit the internal circumference of the conduit(s) designated for CIPP. Allowance shall be made for the circumferential stretching during insertion of the tube.
- E. The Contractor shall be responsible for determining the minimum length to effectively span the distance from the manhole to manhole and shall verify the length of the fabric tube in the field before the tube is either cut to length or wet-out with resin. The tube may run through one or more manholes with the approval of the Owner.
- F. The Contractor will be responsible for locating and accessing all manholes.

- G. The Contractor will be responsible for any cost of water used on the Project. A water meter and backflow device must be obtained from the main office of the Cobb County Water System for recording water usage used for cleaning, inversion and other work items requiring water. The office address is 660 South Cobb drive, Marietta, Georgia. The main office phone number is 770-419-6208.
- H. Traffic Control: The Contractor shall be responsible for traffic control during the course of each phase of the work. A Cobb County Department of Transportation (CDOT) Utility Permit shall be required for all partial and full lane closures. Road closures and / or detours shall require a CDOT Road Closure Permit. Contractor shall submit a traffic control plan to the Owner a minimum of two weeks prior to partial or full lane closures and a minimum of four weeks prior to a road closure along with other pertinent information needed for the associated permit application. The Owner will submit the permit application to CDOT. The traffic control plan shall conform to CDOT requirements and be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways. The Contractor shall install and maintain traffic control compliant with the approved permit, including but not limited to, trained and properly equipped flagmen, to safely control all traffic through the work zone(s). It is the Owner's intent that this work be accomplished with as little disturbance to traffic, private property, and the public as is reasonably possible, consistent with timely completion thereof.

3.02 DAILY WORK SCHEDULE

To the extent possible, work shall be scheduled so that the lining of the pipe, curing of the tube, and the reinstatement of service connections can be accomplished in a single working day or shift. Prior approval must be obtained from the Owner if work is to be performed at night or on weekends to minimize traffic disturbance. At the end of each working day, temporary tie connections shall be made between the relined section of pipe and the existing system and the plug in the upstream manhole removed, but not before the section being lined has been properly cured in accordance with the manufacturer's instructions and all service connections are reinstated. In some instances, it may be necessary to bypass sewage flow from service connections.

3.03 SEWAGE FLOW ATTENUATION AND DIVERSION

- A. The installation methodology contemplated requires the temporary blocking and back-ups of sewers and sewage. Contractor shall be responsible to limit the extent and duration of such blockages and back-ups so that overflows and spillage onto public or private property and into storm sewers, waterways, and streets does not occur. In the event that such spillage or overflows do occur during the course of or as a result of the work, the Contractor performing the work shall notify the Owner and immediately eliminate the spillage or overflow and, as necessary, remove the blockage and eliminate the back-up. In the event that the Contractor does not have the means necessary to immediately remove the blockage, he shall notify the Water System's Emergency Dispatch at 770-419-6201. On elimination of the spillage or overflow, the Contractor is to clean up and disinfect the area. Work to stop or contain such events is to be deemed emergency in nature and sufficient justification for total mobilization of resources, the use of overtime or double time, and any other

reasonable measures to assure correction of the problem without delay. Damages, Owner incurred costs, and/or regulatory fines arising from blockages, back-ups, spillage, or overflows of sewage during the course of the work or because of the work shall be the sole responsibility of the Contractor.

- B. Sewage flow shall be diverted around pipe segments during the installation and testing of cured-in-place pipe, the televising of sewers and sewer service reinstatement. The Contractor shall notify the Owner a minimum of 48 hours in advance of any planned flow diversion.
- C. The Contractor shall be required to contact all residential and commercial customers whose service lines connect to the sewer main being bypassed and inform them that they will be temporarily out of service. The Contractor shall also advise those customers against water usage until the mainline is back in service. After completing the necessary work on the main line to allow its reuse, the Contractor shall advise those customers that the sewer main is back in service. The Contractor shall maintain a high degree of professionalism, both in workmanship and appearance, at all times. Should a condition arise that the Contractor cannot restore service within 12 hours of service interruption; the Contractor shall make provisions for pumping all flows within the service interruption area at no cost to the Owner.
- D. Bypass pumping shall be performed in accordance with Section 02750 of these Specifications.

3.04 PRELIMINARY INSTALLATION REQUIREMENTS

- A. Prior to CIPP installation, the pipe shall be cleaned to the satisfaction of the Owner and in accordance with Section 13327 of these Specifications.
- B. Pre-Installation Video Inspection: The section of sewer designated for CIPP shall be televised its full length using a remote television camera in accordance with Section 13328 of these Specifications and shall be submitted to the Owner for review.

3.05 RESIN IMPREGNATION OF THE CIPP TUBE (WET-OUT)

The **Contractor** shall designate a location where the tube shall be impregnated or “wet-out” with resin, using distribution rollers and a vacuum impregnation system to thoroughly saturate the tube’s felt fiber prior to installation in the field. The impregnated tube shall be free of pinholes, resin voids and other defects. If the cured-in-place pipe is impregnated at the manufacturing plant, it shall be delivered to the job site in a refrigerated truck, and remain refrigerated prior to installation to prevent premature curing. The flexible tube shall be vacuum impregnated with resin under controlled conditions or by such other means provided such means can assure through resin impregnation to the full satisfaction of Owner. The volume of resin used shall be sufficient to fill all voids in the tube material at normal or design thickness and diameter. The volume of resin shall be adjusted by adding seven to ten percent excess resin for the change in resin volume due to polymerization and allow for any migration of resin into the cracks and joints in the original pipe.

3.06 INVERSION OF CIPP

- A. The impregnated tube shall be inverted through an existing manhole or other approved access point utilizing a hydrostatic water column or pressurized air until it has fully traversed the designated line length and the inversion face breaches the destination manhole or termination point. The fluid column shall have been adjusted and maintained to be sufficient to cause the impregnated tube to hold tight against the existing pipe wall, produce dimples at side connections, and flared ends at the manholes. Lubricant during inversion shall be used as necessary in accordance with the CIPP manufacturer's recommendations. Thermocouples shall be placed at the top and bottom interface of both ends of the liner for monitoring temperature during the cure cycle. Care should be taken during tube installation not to over-stress the fabric fiber and to minimize longitudinal stretch, resin loss and thinning of the liner wall.
- B. Pull-In and Inflate (PIF) methods, ASTM reference F-1743 of any kind will not be acceptable for the installation of CIPP under this Contract.
- C. When using pressurized air, particular attention should be given to the maintenance of the minimum required "finished and installed" thickness of the CIPP. Before the inversion begins, the tube manufacturer shall provide the minimum air pressure required to hold the tube tight against the host pipe and the maximum allowable pressure so as not to damage the tube. Once the inversion has started, pressure shall be maintained between the minimum and maximum pressures until the inversion has been accomplished.

3.07 CURING

- A. Using Circulated Water
 - 1. A suitable source of heat and water recirculation equipment is required to circulate heated water throughout the pipe. The equipment shall be capable of delivering hot water throughout the inverted tube to uniformly raise the temperature required to affect a cure of the resin.
 - 2. Initial cure will occur during temperature heat-up and is completed when exposed portions of the new pipe appear to be hard and sound and the thermocouples indicate that the temperature is of a magnitude to realize an exotherm or cure in the resin. After initial cure is reached, the temperature should be raised to the post-cure temperature recommended by the resin manufacturer. Post-Cure temperature should be held for a period as recommended by the resin manufacturer, during which time the recirculation of the water and cycling of the heat source to maintain the temperature continues.
 - 3. Prior to any inversion, the Contractor shall provide a Post-Cure Hold Time and Temperature Table to the Owner in accordance with per Article 1.04 of this Section of these Specifications. This table shall indicate the minimum time and temperature the inverted tube will be held at in order to achieve

desired physical properties. The resin manufacturer shall certify both the time and temperatures presented in the table.

4. Curing must take into account the existing pipe material, the resin system, and the ground conditions (temperature, moisture level, and thermal conductivity of the soil).

B. Using Controlled Steam

1. Suitable steam-generating equipment is required to distribute steam throughout the pipe. The equipment shall be capable of delivering steam throughout the inverted tube to uniformly raise the temperature required to affect a cure of the resin.
2. Initial cure will occur during temperature heat-up and is completed when exposed portions of the new pipe appear to be hard and sound and the thermocouples indicate that the temperature is of a magnitude to realize an exotherm or cure in the resin. After initial cure is reached, the temperature should be raised to the post-cure temperature recommended by the resin manufacturer. Post-Cure temperature should be held for a period as recommended by the resin manufacturer, during which time the distribution and control of steam to maintain the temperature continues.
3. Prior to any inversion, the Contractor shall provide a Post-Cure Hold Time and Temperature Table to the Owner per Article 1.04 of this Section. This table shall indicate the minimum time and temperature the inverted tube will be held at in order to achieve desired physical properties. The resin manufacturer shall certify both the time and temperatures on the table.
4. The Time and Temperature Table submitted when using steam curing shall be identical to time and temperature hold times when curing with heated, circulated water.
5. Curing must take into account the existing pipe material, the resin system, and the ground conditions (temperature, moisture level, and thermal conductivity of the soil).

3.08 COOL-DOWN

Cool-down of the CIPP shall be in accordance with the manufacturer's recommendations. Absolute care shall be taken during the cool-down process so as to minimize shrinkage of the CIPP.

3.09 TERMINATION AND SEALING AT MANHOLES

- A. Termination of the CIPP at the manhole shall be completed by trimming the cured pipe end back in accordance with the CIPP manufacturer's recommendations.
- B. No annular space shall be visible between the CIPP and manhole wall. In the event the finished liner does not fit tightly against the original pipe at its termination

point(s), the void between the liner and the host pipe shall be sealed and made watertight utilizing manhole end seals or a mixture of resin/epoxy compatible with the CIPP to the satisfaction of the Owner at no additional cost to the Owner.

3.10 SEWER SERVICE REINSTATEMENT

- A. After the CIPP has been cured, the existing service connections and laterals shall be reinstated. In general, reinstatement of service connections and laterals shall be accomplished internally, without surface excavation, using a remote control cutting device equipped with a television monitor. Reopened services shall be wire brushed to the satisfaction of the Owner. In some cases, remote reinstatement may not be possible. In these instances, reinstatement by conventional methods in accordance with the standard Specifications is acceptable.
- B. All connections must be reinstated by at least 95-percent of the original opening. Hole cuts outside the lateral opening or oversized cutting (more than 100% of the original opening size) must be repaired to the Owner's satisfaction at the Contractor's expense.
- C. Particular attention shall be given to the lower quadrant of the cut opening to ensure that no accumulation of debris will occur.
- D. All capped or factory plugged service connections shall not be opened unless otherwise directed by the Owner.

3.11 TESTING OF CIPP

- A. The Owner may, at its discretion, direct the Contractor to collect samples of the cured CIPP. The samples shall be for laboratory determination of flexural strength, flexural modulus and wall thickness for each test sample. These three individual analyses shall comprise one completed test. All samples shall be collected per the sampling protocols set forth in ASTM F1216.
- B. When directed by the Owner, from the point most distant from the heat source, the Contractor shall remove one restrained sample of the installed liner at least 12 inches in length for testing. For sewers 15 inches and larger, plate samples may be taken and cured in the same water as the installed CIPP. For each sample taken, the Contractor shall cut and deliver a 12-inch wide representative sample (taken at least 2 inches from the end of the specimen) to the Owner. The sample delivered to the Owner shall be labeled and removed from any restraining mold. The Owner may return such samples to the Contractor for disposal.
- C. The tests shall be used to verify that the installed CIPP meets these specifications. CIPP thickness shall be measured in accordance with ASTM D5813. Flexural properties shall be determined per ASTM D790. The Contractor shall label and date all samples and deliver the samples directly to the Owner. All testing shall be performed by an independent, ASTM-certified testing laboratory of the Owner's designation. Payment to the Contractor shall be withheld pending the Owner's acceptance of the CIPP test results.

- D. Any liner that does not meet the specified strength and/or thickness requirements, regardless of the amount below the specified requirements, shall be corrected by the Contractor in a manner approved by the Owner at no additional cost. The Owner's decision on how to correct deficient CIPP installations shall be final. Options for correcting deficient liners that will be considered by the Owner include removing the liner and re-lining the sewer, excavating and replacing the sewer from manhole to manhole, or providing the Owner with a substantial credit. The primary option that will be considered will be to re-line the sewer. Credits will only be authorized for CIPP that does not meet required thickness. If a credit is acceptable to the Owner, the credit shall be calculated by multiplying the bid price by the percent that the liner thickness is below the required installed thickness as follows:

$$\text{Credit} = (1 - \text{Installed CIPP thickness/required CIPP thickness}) \times \text{bid price}$$

- E. The Contractor shall not assume a credit will be acceptable to the Owner in any case.
- F. The laboratory cost for CIPP testing under this section shall be paid via an allowance included in the Bid Schedule.

3.12 FINAL ACCEPTANCE

- A. Post-installation videos shall be conducted and submitted to the Owner in accordance with Section 13328 of these Specifications. The finished CIPP shall be continuous over the length of pipe between two manholes and shall be an impermeable, joint-less conduit, free from visual defects such as foreign inclusions, dry spots, pin holes, lifts, or delamination. The Owner will not approve payment of post-installation videos for those pipe runs that the finished CIPP does not meet the requirements of this Section of the specifications.
- B. Wrinkles in the CIPP, (other than minor, longitudinal pressure wrinkles) will not be acceptable. The Owner shall determine as to the acceptability of pressure wrinkling with that decision being final.
- C. After curing of the resin is completed, the hardened CIPP shall extend from manhole to manhole of the section designated providing a structurally sound, corrosion-resistant, watertight conduit that excludes exfiltration and infiltration, is tight-fitting within the existing pipe, and is free of voids or annular spaces between the CIPP and the existing pipe walls. K-Factor for tightness shall equal 7.0 or greater. All terminations into the manhole walls shall be watertight at the time of final inspection. No annular space shall be visible between the CIPP and manhole wall.
- D. The finished pipe must be such that when the thermosetting resin cures, the total wall thickness will be a homogeneous, monolithic felt and resin composite matrix that will be chemically resistant to withstand internal exposure to domestic sewage. When cured, the CIPP must form a mechanical bond with the host pipe.
- E. Payment for CIPP installation will be made by Owner upon final acceptance.

3.13 SITE RESTORATION

- A. All lawn areas maintained by property owners that were damaged by the Contractor's operations are to be replaced in kind (predominant) with sod, regardless of the apparent method of original planting. The Contractor shall utilize a professional landscape company to identify and list by address the predominant grass type found prior to disturbance or preferred by the property owner. Seeding and mulching shall be utilized in areas not maintained by owners as lawns. Sod and seeding are to be installed in conformance with the requirements in Section 02485 (Seeding) and Section 02486 (Sodding) of these Specifications.
- B. Fences, which have been removed or damaged by the Contractor's operations, shall be restored to a condition at least equal to that in which they were found immediately prior to the beginning of the Contractor's operations. Suitable materials and methods shall be used for such restoration.
- C. If the event the Contractor's operations cause any property damage outside the sewer easement, the Contractor shall restore the damaged property to a condition at least equal to that in which the property was found immediately prior to the beginning of the Contractor's operations. Trees, shrubs and ground covers are to be installed in conformance with the requirements of Section 02490 (Trees, Shrubs and Ground Covers).
- D. Restoration shall be done as promptly as practicable and shall not be left until the end of the construction period. Compensation for any restoration work required shall be included in the payment item for Cured-In-Place Pipe.

END OF SECTION

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ATTACHMENT NO. 3

COBB COUNTY WATER SYSTEM APPLICATION FOR PREQUALIFICATION FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION

The following requirements are included in each construction contract issued by the Cobb County Water System as Section 00750 of the Contract Documents. The Applicant must provide evidence of coverage and applicable endorsements at the time the contract is executed. Note that the need for Builder's Risk coverage will be assessed by the Owner on a project-by-project basis. Section 00750 reads as follows:

SECTION 00750 INSURANCE REQUIREMENTS FOR CONTRACTORS

The Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with performance of the work hereunder by the Contractor, his agents, representatives, employees, or subcontractors.

Attention: The Contractor is advised that certain provisions contained herein require specific endorsements of your insurance policy. Do not assume that your standard policy will be suitable to meet the requirements of Cobb County. The submittal of incomplete or non-conforming documents will delay the execution of the Contract/Agreement and the issuance of the Notice-to-Proceed for the Project.

1. MINIMUM LIMITS OF INSURANCE

- A. Statutory Workers' Compensation Insurance. The statutory limits as established by the General Assembly of the State of Georgia shall be met by Contractor and/or subcontractor. The workers' compensation policy must include Coverage B - Employer's Liability with minimum limits of:

Bodily Injury by Accident - \$1,000,000 each accident

Excess liability coverage may be used in combination with the base policy to obtain these limits. The Contractor shall require all subcontractors, of any tier, performing work under the contract to obtain an insurance certificate showing proof of Workers' Compensation and Employers Liability Coverage or shall certify that the subcontractors are covered by the Contractor's insurance.

- B. Commercial General Liability Insurance. The Contractor shall procure and maintain a Commercial General Liability Insurance Policy covering bodily injury, property damage liability and personal injury. The policy or policies must be on an "occurrence" basis ("Claims Made" coverage is not acceptable) insuring personal injury and property damage against the hazards of premises and operations, products and completed operations, blasting and explosion, collapse, underground damage, independent contractor's and contractual liability (specifically covering the indemnity) and have the minimum limits of liability listed below. The Commercial General Liability policy shall also include contractual

liability coverage. The Commercial General Liability policy must include separate aggregate limits per project. Excess liability coverage may be used in combination with the base policy to obtain the following limits.

Premises and Operations	\$1,000,000 per Occurrence
Products and Completed Operations	\$1,000,000 per Occurrence
Personal Injury	\$1,000,000 per Occurrence
Contractual	\$1,000,000 per Occurrence

- C. Auto Liability Insurance. The Contractor shall procure and maintain a Business Automobile Liability Policy with liability limits of not less than \$1,000,000 per person and \$1,000,000 per occurrence or a policy with a Combined Single Limit of not less than \$1,000,000 covering any owned, non-owned or hired autos. Excess liability coverage may be used in combination with the base policy to obtain these limits. The form of coverage must be as follows and/or cover the following areas:

Comprehensive form covering all owned, non-owned, leased, hired, and borrowed vehicles
Additional Insured Endorsement
Contractual Liability

- D. Commercial Umbrella Liability Insurance. The Contractor shall provide Commercial Umbrella Liability Insurance to provide excess coverage above the Commercial General Liability, Commercial Business Automobile Liability, and the Workers' Compensation and Employers' Liability to satisfy the minimum limits set forth herein. The Umbrella coverage shall follow form with the Umbrella limits required as follows:

\$2,000,000 Combined Single Limits per Occurrence

- E. Builder's Risk Insurance. The Contractor shall secure "All-Risk" type of Builder's Risk insurance covering work performed under the Contract, and materials equipment or other items to be incorporated therein, while the same are located at the construction site, stored off-site, or at the place of manufacture. The policy limit shall be for 100% of the value of the Contract. The policy shall cover not less than losses due to fire, flood, explosion, hail, lightning, weather, vandalism, malicious mischief, wind, collapse, riot, aircraft, smoke or other cataclysmic events, until the date of final acceptance of the work.

The making of progress payments to the Contractor shall not be construed as relieving the Contractor or his subcontractors or the insurance company or companies providing the coverage described herein of responsibility for loss or direct physical loss, damage or destruction occurring prior to final acceptance.

2. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

- A. Additional Insured Endorsement – General Liability, Automobile Liability, and Umbrella Liability
1. The “Owner, Construction Manager, Engineer and their respective officers, officials, employees, and volunteers” are to be covered as Additional Named Insureds as respects all liabilities to be insured against by the policies described in Subsections 1.B, 1.C, and 1.D above.
 2. The coverage shall contain no special limitation on the scope of protection afforded to the Owner, Construction Manager, Engineer and their respective officers, officials, employees, or volunteers. Nothing in this paragraph shall be construed to require the Contractor to provide liability insurance coverage to the Owner, Construction Manager, or Engineer for claims asserted against the Owner, Construction Manager, or Engineer for their sole negligence.
 3. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
 4. Provide a separate endorsement for each policy, signed by the authorized agent and citing individual policy numbers.
 5. The coverage shall be primary and shall contain no special limitations on the scope of protection afforded to the Certificate Holder/Additional Insured.
 6. Coverage shall be provided on a “pay on behalf” basis, with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion.
 7. In lieu of a separate endorsement, a copy of the declaration page for the Umbrella Liability Policy may be provided, listing the policy numbers for each type of insurance covered by the Umbrella.
- B. Waiver of Subrogation Endorsement – Workers' Compensation and Employers' Liability Coverage
1. The insurer shall agree to waive all rights of subrogation against the Owner, Construction Manager, Engineer and their respective officers, officials, employees, and volunteers for losses arising from work performed by the Contractor for the Owner under the Contract.
 2. Provide a separate endorsement for the policy, signed by the authorized agent and citing individual policy number.
- C. Notice of Cancellation Endorsements – General Liability, Automobile Liability, Umbrella Liability, and Workers' Compensation
1. Each insurance policy shall be endorsed to state that should any coverage be suspended, voided, cancelled or reduced in coverage or in limits, thirty days prior written notice will be given to the Certificate Holder. Notice of cancellation for non-payment of premium shall be not less than ten days.
 2. Provide a separate endorsement for each policy, signed by the authorized agent and citing individual policy numbers.

3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Owner, Construction Manager, Engineer and their respective officers, officials, employees, or volunteers.

D. Deductibles and Self-insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, Construction Manager, Engineer and their respective officers, officials, and employees; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claims administration, and defense expenses.

All deductibles shall be paid by the Contractor.

E. Failure of Insurers

The Contractor is responsible for any delay resulting from the failure of its insurance carriers to furnish proof of coverage in the prescribed form. The summary table shown below in paragraph 4.C can serve as a checklist to confirm the submittal of all required endorsements.

F. Contractor's Property and Equipment

The Contractor is responsible for insuring its own property and equipment.

3. ACCEPTABILITY

- A. The insurance purchased by the Contractor must be issued by a company licensed by the Insurance Commissioner to transact business in the State of Georgia or by a company acceptable to the State if the company is an alien insurer.
- B. Insurance is to be placed with insurers with a Best Policyholders Rating of "A" or better and with a financial size rating of Class VII or greater, or be otherwise acceptable to the Owner.

4. VERIFICATION OF COVERAGE

- A. The Contractor shall furnish the Owner with four original Certificates of Insurance, each with endorsements effecting coverage required by this Section of the Contract Documents. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.
- B. The insurance certificate must provide the following:
 1. Name and address of authorized agent.
 2. Name and address of insured. Name of insured must appear exactly as shown on Contractor's seal on Contract with Owner.

3. Name of insurance company(ies).
4. Description of policies.
5. Policy number(s).
6. Policy period(s).
7. Name and address of Owner as Certificate Holder (see Subsection D below).
8. Cobb County Water System Program Name and Number.
9. Signature of authorized agent.
10. Telephone number of authorized agent.

C. The required endorsements to be submitted are summarized in the following table:

ENDORSEMENT SUMMARY TABLE

Type of Insurance	Endorsement
General Liability	Owner, etc. as Additional Insured
General Liability	Notice of Cancellation
Automobile Liability	Owner, etc. as Additional Insured
Automobile Liability	Notice of Cancellation
Umbrella Liability	Owner, etc. as Additional Insured ¹
Umbrella Liability	Notice of Cancellation ¹
Workers' Compensation	Waiver of Subrogation
Workers' Compensation	Notice of Cancellation

¹Declarations pages may be submitted for Umbrella policies.

D. The Certificate Holder must be shown as:

Cobb County, Georgia
 Attention: Cobb County Water System
 Engineering & Records Division
 660 South Cobb Drive
 Marietta, GA 30060-3105

E. The certificates and endorsements naming additional insureds and indicating required waivers are to be submitted with the executed Agreement/Contract and Performance and Payment Bonds, for approval by the Owner before work commences. The Owner reserves the right to require the submittal of complete, certified copies of all required insurance policies at any time.

5. SUBCONTRACTORS

Contractor shall include all subcontractors as additional insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. Coverage for subcontractors shall be subject to all of the requirements stated herein. Owner may request evidence of subcontractor's insurance. Contractor shall ensure that all subcontractors comply with the insurance requirements and provisions of this Section.

END OF SECTION

ATTACHMENT NO. 4

**COBB COUNTY WATER SYSTEM
APPLICATION FOR PREQUALIFICATION
FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION**

COBB COUNTY POLICY ON PRE-QUALIFICATION OF CONTRACTORS

The following four pages entitled “Final Adopted Version – July 12, 2005, Policy on Pre-qualification of Contractors” is Cobb County’s current contractor prequalification policy, as adopted by the Board of Commissioners on July 12, 2005.

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FINAL ADOPTED VERSION -JULY 12, 2005
POLICY FOR PRE-QUALIFICATION OF CONTRACTORS

PURPOSE AND SCOPE

To provide direction and policy for the prequalification of general contractors (involving multiple subcontractors) for Cobb County facility and building construction or renovation projects, Cobb County Water System water and sewer line contractors, and for Department of Transportation projects to allow the selection of the most qualified and most responsible construction contractors at the best price for County projects. When utilized, this policy will eliminate repeating the process of determining qualifications of contractors each time a project is needed. Prequalification is most practical for those services which are sought on a regular and frequent basis and where the nature of the scope of work for which future services will be sought is sufficiently standardized to allow the necessary qualifications to be determined and evaluated separately from a specific scope of work. This policy is not intended to preempt the County from choosing to pre-qualify contractors on a project by project basis, particularly where related experience on a large and/or highly specific project may be more important than price. Any provision in this policy that is or may become in conflict with controlling state law, shall be deemed null and void.

A. GENERAL POLICY

- 1) Under a prequalification process, firms will be asked to respond to a Request for Qualifications ("RFQ") which has been developed for a particular type of construction services. The qualifications submitted by each firm in response to the RFQ will be evaluated by a Review Committee(s) (the "Committee") appointed by the County Manager. The Committee will make a recommendation to the Board of Commissioners as to whether a firm should be included on a list of approved firms to perform the particular type of construction services. No RFQ will be accepted or considered from a firm having a pending citation for violating any provision of The Official Code of Cobb County, Georgia as of the deadline for submitting the RFQ. This policy shall extend to any member, officer, partner, subsidiary or affiliate thereof. This exclusion shall extend to a firm which incurs a pending citation after submitting an RFQ but before recommendation is made to the Board of Commissioners, if the citation remains pending at such time.
- 2) Multiple lists of qualified firms may be created by the Board of Commissioners when there is a sufficient degree of variance in size, type, and/or difficulty of scope of work or services to be rendered. This allows qualified firms of all sizes to have the opportunity to provide services to Cobb County. Multiple lists of qualified firms may also be created by the Board of Commissioners for each individual County department that is responsible for implementing construction projects covered by this policy.
- 3) A firm may be removed from any approved list by the Board of Commissioners pursuant to paragraph B, section 8 of this Policy if it performs unsatisfactorily, becomes financially unstable, regularly fails to submit bids on County projects, or for any other

FINAL ADOPTED VERSION -JULY 12, 2005
POLICY ON PRE-QUALIFICATION OF CONTRACTORS

reason deemed to be in the best interest of the County. Additionally, upon the recommendation of the Agency Director of Cobb County Community Development, a firm may be removed from any approved list by the Board of Commissioners which has a pending citation for violating any provision of the Official Code of Cobb County, Georgia (including any member, officer, partner, subsidiary, or affiliate thereof). Removal pursuant to this authority shall not be subject to the provisions of Section 8 hereof.

- 4) Unless extended pursuant to the terms of this Policy, every two (1) years the existing lists will be abandoned and the pre-qualifying process will begin anew.

B. PRE-QUALIFICATION PROCESS:

- 1) Prequalification shall be used as the first step of the competitive selection process for selection of contractors to identify eligible contractors for covered projects.
- 2) The lists of pre-qualified contractors will be developed every two (2) years through a competitive, advertised proposal response process. Advertisement for RFQ's will be for four (4) consecutive weeks, or as provided by law, and will be published in the legal organ of the County.
- 3) The RFQ's will be prepared by the Committee(s). The RFQ will request information concerning the contractor's experience, staff experience, staff qualifications, previous work experience, financial stability (including bonding capacity and insurance), references, conflicts of interest, location of established office in the metro Atlanta area, and other pertinent information. These criteria will be used by the Committee(s) to evaluate the capability of the contractor to perform.
- 4) Contractors who are not on a pre-qualified list and who wish to be pre-qualified during the two (2) year period may submit a response in compliance with the original Request for Qualifications at any time during the two (2) year prequalification period. If necessary, at the end of each calendar quarter, the Committee(s) will review all interim applications received during such quarter. The applicable quarters end on January 1, April 1, July 1 and October 1 of the first year and January 1, April 1 and July 1, of the second year of the prequalification period, unless extended in which event the same schedule of quarters for the first year shall apply. In order for an interim application to be considered in a particular quarter it must be received by the Purchasing Department before 5:00 p.m. on these dates. Should any date referenced within this paragraph fall on a Saturday, Sunday or County Holiday, the deadline for submission of responses shall be 5:00 p.m. on the first County workday following said dates. Approved prequalification of all contractors shall expire at the end of the two (2) year period, whether approved at the beginning or during the prequalification period. Any pre-qualified list may be extended beyond the two year period upon approval by the Board of Commissioners.
- 5) On all construction or renovation projects anticipated to exceed \$100,000 or any other amount which may be specified by State law or Cobb County ordinance, there shall be an advertisement for bids in the local organ and/or the internet for four (4) consecutive weeks requesting bids only from contractors on the appropriate pre-qualified list(s). Bids received for construction projects covered under this policy from contractors not on a

FINAL ADOPTED VERSION -JULY 12, 2005
POLICY ON PRE-QUALIFICATION OF CONTRACTORS

pre-qualified list will be rejected and returned unopened. Bids will be awarded to the lowest responsive bidder.

- 6) On all construction or renovation projects anticipated to exceed \$25,000, acceptable performance and payments bonds, as defined in the Invitation to Bid for each respective project, shall be required to be submitted to the County after the contractor has been provided notice of award but prior to the County execution of the contract and issuance of notice to proceed. If any applicable law requires bonds for lesser valued projects, that law will control.
- 7) The department responsible for the construction project will evaluate the contractor's performance at the end of each project to determine their eligibility to remain on the pre-qualified list. Evaluation criteria will include but not be limited to the contractor's ability to meet the construction schedule and work within the construction budget; the quality of work; analysis of change orders; administration of the construction project (pay requests, etc.); and the manner with which the contractor works with the architect and county staff.
- 8) A contractor may be removed from the prequalification list at any time based on failure to perform satisfactorily, misrepresentation of qualifications, failure to respond to three consecutive Invitations to Bid, financial instability, or for other reasons deemed to be in the best interest of the County. Notice to the contractor in writing stating reasons for recommended removal will be given by the County.

The contractor recommended to be removed from the list must be notified in writing thirty (30) calendar days prior to the effective date of removal. The notice must outline the reasons for the recommendation and offer the opportunity for the contractor or the contractor's representative to meet with the Committee and provide evidence that the reasons for removal are not valid. The Committee will hear the evidence and decide whether the proposed removal is justified. If the Committee does not reverse its recommendation for removal, the recommendation will be forwarded to the Board of Commissioners.

The contractor will have the right to appeal the decision of the committee to the Board of Commissioners within thirty (30) calendar days of the date of the Committee's decision. The appeal must be filed with the County Clerk. If an appeal is not timely filed, the committee may request the Board remove the contractor.

Notwithstanding the above, the County may abandon its pre-qualification policy at anytime and the pre-qualified lists shall become null and void. Additionally, nothing contained in this Policy shall serve to create any vested right or property interest with regard to any person or entity being on a pre-qualified list, and no due process shall apply.

- 9) Board of Commissioners' authorization is required to add or delete any contractor from any pre-qualified list. Recommended additions to the list of pre-qualified firms will be presented to the Board of Commissioners on an as needed basis.

FINAL ADOPTED VERSION -JULY 12, 2005
POLICY ON PRE-QUALIFICATION OF CONTRACTORS

C. PRE-QUALIFIED LISTS

Pre-qualified lists of general contractors will be developed and maintained by the Purchasing Department for the following categories:

1. **PROPERTY MANAGEMENT** - General Building Construction and Renovation Projects administered by the Property Management Department
 - a. Covered projects valued at greater than \$250,000 but less than \$1,000,000
 - b. Covered projects valued between \$1,000,000 and \$10,000,000
 - c. Covered projects valued \$10,000,000 and greater

2. **PARKS, RECREATION AND CULTURAL AFFAIRS** Non-Building, Sports or Recreational Facility Construction and Renovation Projects administered by the Parks, Recreation and Cultural Affairs Department
 - a. Covered projects valued at greater than \$250,000 but less than \$1,000,000
 - b. Covered projects valued between \$1,000,000 and \$10,000,000
 - c. Covered projects valued \$10,000,000 and greater

3. **WATER SYSTEM** -Water and sewer line contractors shall be developed and maintained by the Water System for the following categories:

Water and Sewer line projects -All projects regardless of size or value

4. **DEPARTMENT OF TRANSPORTATION** - All Department of Transportation projects.

While DOT does not pre-qualify its contractors for County-funded projects, Department of Transportation may utilize the Georgia Department of Transportation pre-qualified contractors list for projects utilizing state and/or federal funds.

5. **OTHER PROJECTS** - The County reserves the right to pre-qualify any project of a more complex or special nature on an individual project basis.